Work Order ID 119226

119226

May-14-14 10:19:35 AM

Item ID: D4634-5 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Aft, Center Ceiling Panel

Start Date: 5/14/14 **Start Qty:** 1.00 *1*

Required Date: 5/14/14 **Req'd Qty:** 1.00 *1*

Cust Item ID:

Customer:

Reference:

Run Start *NR1*

Stop *NR2*

Approvals: **Process Plan:** MLJ **Date:** 14-05-14 **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr D4634	**Revision Nbr** F								
100	HAND FINISHING THERMOFORMING	0.00							DAS 07 9-89
100 Thermoform	**Memo** Cut Blanks	0.00				xl			14/05/14
Thermoforming Machine									
105	Dry Material	0.00							DAS 07 9-89
105 HandThermo	**Memo** Dry Sheet as per QSI022 POLYCARBONATE	0.00				xl			14/05/14
Hand Finishing Thermoforming	Temp: 245 deg. F MAY 14 2014 Time IN: 5:00 PM Time OUT: 6:00 AM Per.....								

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design ☐									
Doc/Data ☐									
Equip/Tooling ☐									
Handling/Pre ☐									
Material ☐									
Operator ☐									
Offset/Setup ☐									
Process ☐									
Supplier ☐									
Training ☐									
Transport ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function
- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

Work Order ID 119226

119226

May-14-14 10:19:35 AM

Item ID: D4634-5 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Aft, Center Ceiling Panel

Start Date: 5/14/14 **Start Qty:** 1.00 *1*

Required Date: 5/14/14 **Req'd Qty:** 1.00 *1*

Reference:

Cust Item ID:

Customer:

Run Start *NR1*

Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110	THERMOFORMING MACHINE	0.00							DAS 07 9-89
110 Thermoform Thermoforming Machine	**Memo** Thermoform as per Dwg. D4634-5 and Folio FTA146 Dwg. Rev. F Folio Rev. E Visually inspect for proper formation and texture	0.00				X1			14/05/14
130	HAND FINISHING THERMOFORMING	0.00							
130 Thermoform Thermoforming Machine	**Memo** Trim to Finished Dimensions	0.00				X1			BB 14/06/04
140	~~QC-~~ Inspect dimensions to drawing	0.00							DAS 16 9-89
140 QC Quality Control	Dimensional Inspection **Memo** Fill out Inspection Sheet Rev A	0.00							14/06/09

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Work Order ID 119226

119226

May-14-14 10:19:35 AM

Item ID: D4634-5 **Accept** *N9000040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Aft, Center Ceiling Panel

Start Date: 5/14/14 **Start Qty:** 1.00 *1* **Cust Item ID:**

Required Date: 5/14/14 **Req'd Qty:** 1.00 *1* **Customer:**

Reference: **Run Start** *NR1*

Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC5- Inspect part completeness to step on W/O	0.00							
150									
QC	Memo n/a 5	0.00							
Quality Control									
160		0.00							
160	Packaging					1		SAD 14/06/09	
Packaging	Memo Section MF	0.00							
Packaging									
170	QC21- Final Inspection - Work Order Release	0.00							
170						MLJ		14-06-10	
QC	Memo	0.00							
Quality Control									

MF 14-6-10

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
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☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

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☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
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☐ Drill Holes
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☐ Hardware
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☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Picklist Print

May-14-14 10:19:40 AM

Work Order ID: 119226 *119226*

Parent Item: D4634-5 *D4634-5*

Parent Item Name: Aft, Center Ceiling Panel

Start Date: 5/14/14 **Required Date:** 5/14/14

Start Qty: 1.00 **Required Qty:** 1.00

Comments: IPP Rev. A New Issue 12/05/07 DL VERIFIED BY:JLM IPP Rev. B Dwg. Update 13/07/09 DL verf:DD IPP Rev C Dwg. Update, Material Change 13/12/18 DL IPP Rev. D 14/01/20 Dwg Update DL

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MLEXS.093-F6006-07		Purchased	No			100	sf	1,708.773	17.33 **	18			~~DAS~~ 07 ~~9-89~~

MLEXS.093-F6006-07

GE PLASTICS LEXAN SHEET

14/05/14

Location	Loc Qty	Loc Code	
MAT023	1708.77332		
114459	229.26		
123105	38		
124501	543.5		
m128668	620.68		18 sq ft
m129014	277.33332		

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

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Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

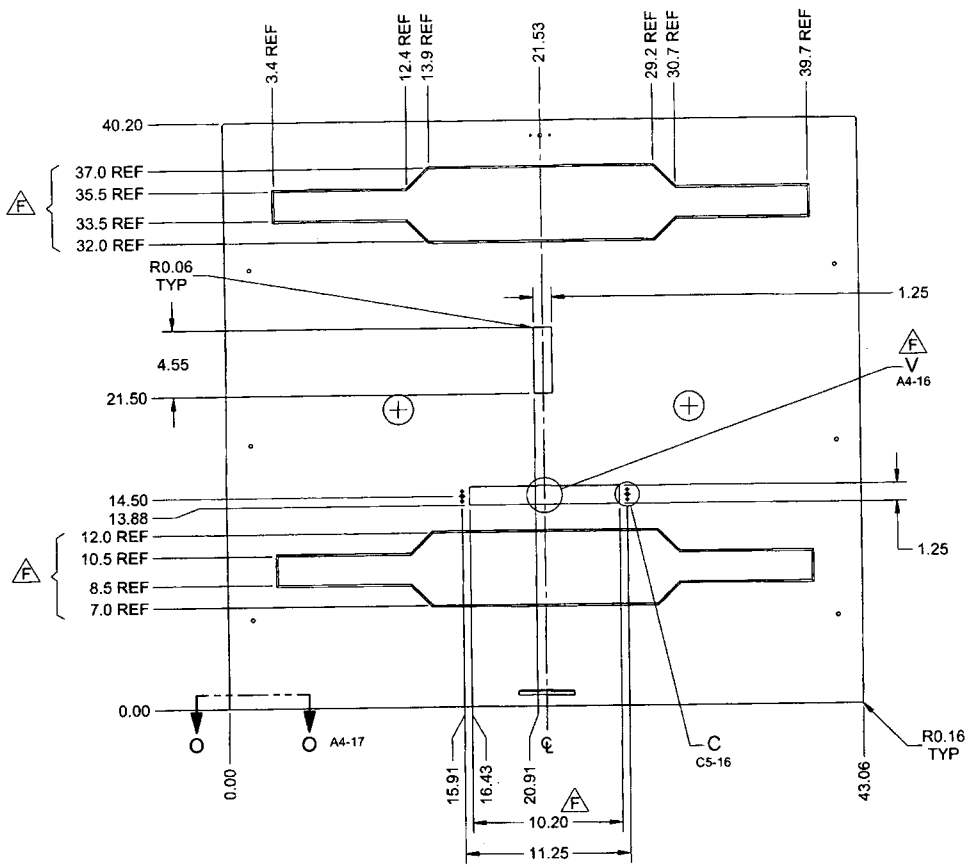
FAULT CATEGORY

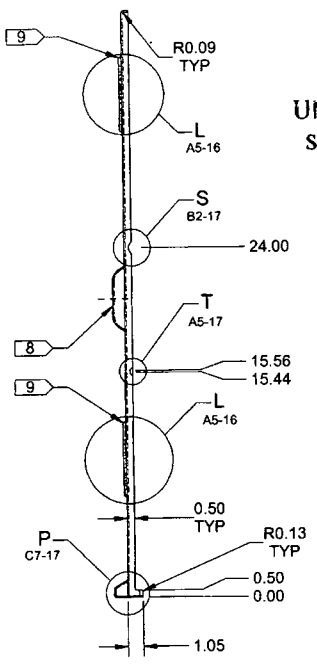
Landing Gear

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☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other





SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 192226 MLJ
14-05-14

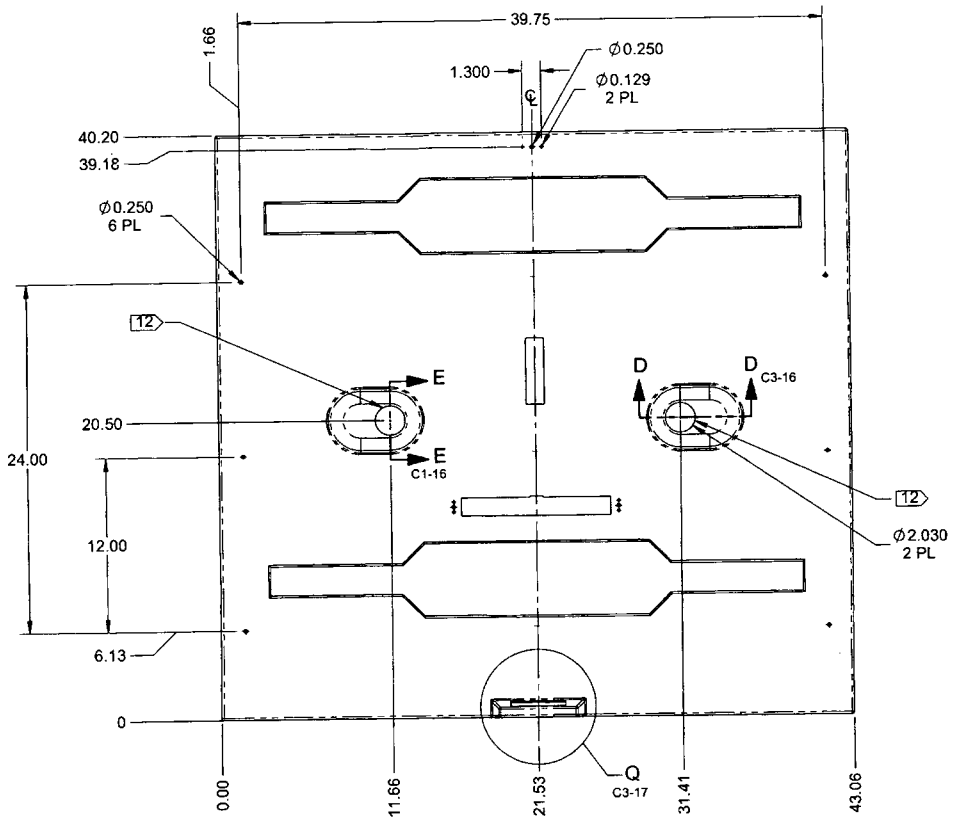
RELEASED
2014 FEB 25

NOTES:
1) MATERIAL: F6006 SUEDE/POLISHED GY5B133 LIGHT GREY LEXAN SHEET 0.093 THICK
(REF DART SPEC MLEXS.093-F6006-07)
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 7.39 lbs
8) TEXTURE ON THIS SIDE
9) 0.14 RADIUS NOT SHOWN FOR CLARITY
10) DRILL & TRIM D4634-5 PER TOOL DT9838
11) THERMOFORM PER QSI 022 USING DT9846 TOOL
MIN. THICKNESS AFTER FORMING:
EDGES = 0.060
ELSEWHERE = 0.070
12) LOCATE Ø2.030 AT CENTER OF PROTRUDED SURFACE AS SHOWN

D4634-5 AFT, CENTER CEILING PANEL

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	DRAWING NO. D4634 REV. F
CHECKED	JC	SHEET 14 OF 17
MFG. APPR.		TITLE CENTER CEILING PANELS SCALE NTS
APPROVED		
DE APPR.		
DATE	14.02.03	

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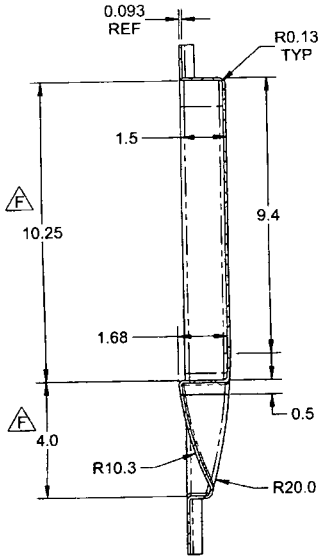


D4634-5 AFT. CENTER CEILING PANEL
AUXILIARY VIEW

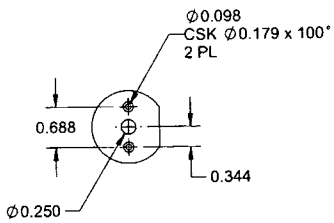
RELEASED
2014 FEB 25

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	DRAWING NO. REV. F
CHECKED	DC	D4634 SHEET 15 OF 17
MFG. APPR.		TITLE SCALE
APPROVED		CENTER CEILING PANELS NTS
DE APPR.		
DATE	14.02.03	

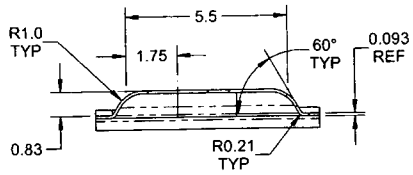
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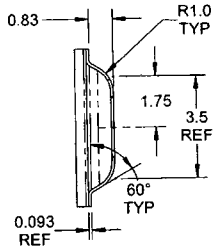
SECTION G-G C5-11
SCALE 4X



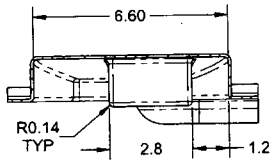
DETAIL C B7-10 B4-12 B4-14
SCALE 4X



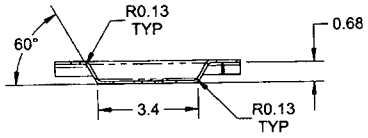
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SCALE 2X



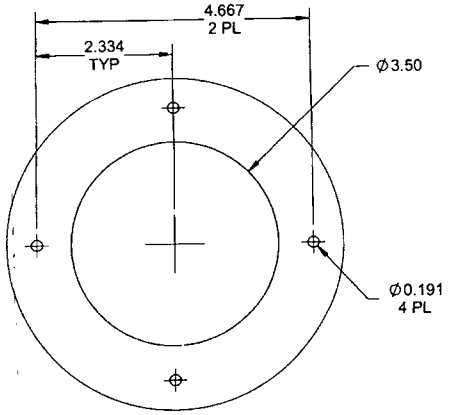
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SCALE 4X



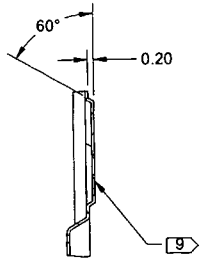
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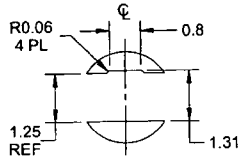
SECTION J-J B6-13
SCALE 2X



DETAIL B B7-10
SCALE 4X
2 PL



DETAIL L B2-13 C2-13 B2-14 C2-14
SCALE 4X
TYP

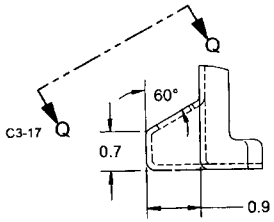


F DETAIL V C4-10 B4-12 C4-14
SCALE 2X
SIMILAR

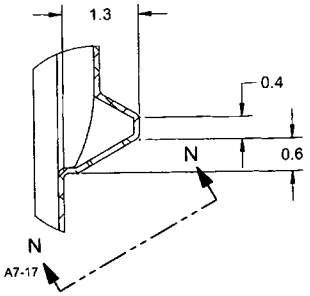
RELEASED
2014 FEB 25

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	DRAWING NO. D4634 REV. F
CHECKED	DC	SHEET 16 OF 17
MFG. APPR.		TITLE CENTER CEILING PANELS
APPROVED		SCALE NTS
DE APPR.		
DATE	14.02.03	

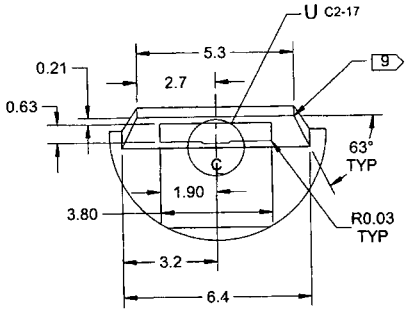
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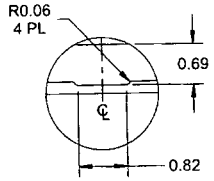
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SCALE 2X



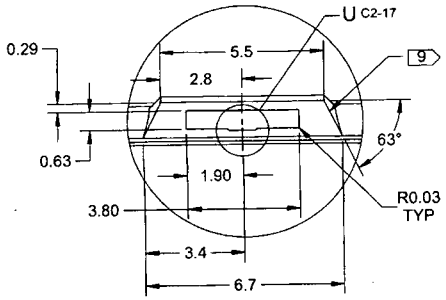
DETAIL M C3-10
SCALE 2X



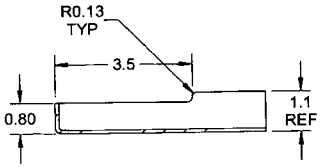
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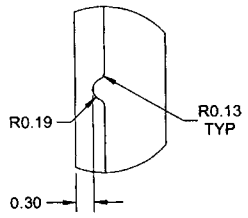
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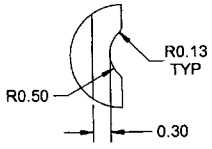
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SCALE 0.5X



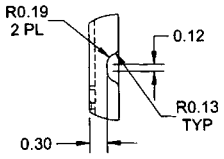
SECTION O-O B6-14
SCALE 1.3X



DETAIL R B3-10 C3-10 B2-12
SCALE 4X



DETAIL S B3-10 C2-12
SCALE 4X



DETAIL T C2-14
SCALE 4X

RELEASED
2014 FEB 25

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	DRAWING NO. REV. F
CHECKED	DC	D4634 SHEET 17 OF 17
MFG. APPR.		TITLE SCALE
APPROVED		CENTER CEILING PANELS NTS
DE APPR.		
DATE	14.02.03	

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DART AEROSPACE LTD

Description: Aft Center Ceiling Panel		Work Order:	119226
Inspection Drawing: 4634-5	Rev: F	Part Number:	D4634-5

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
10.20	±0.030	10.20	✓		M-T	SFAB-21
11.25	±0.030	11.25	✓		↓	↓
15.91	±0.030	15.91	✓		↓	↓
1.25	±0.030	1.25	✓		Vern	SFAB-08
4.55	±0.030	4.55	✓		"	↓
21.50	±0.030	21.50				↓
13.88	±0.030	13.88	✓		M-T	SFAB-21
1.25	±0.030	1.25	✓		Vern	SFAB-08
21.53	±0.030	21.53	✓		M-T	SFAB-21
12.00	±0.030	12.00	✓		↓	↓
24.00	±0.030	24.00	✓		↓	↓
20.50	±0.030	20.50	✓		↓	↓
Ø 0.250	+0.005 -0.001	Ø 0.250	✓		Vern	SFAB-08
39.75	±0.030	39.75	✓		M-T	SFAB-21
1.300	±0.010	1.300	✓		Vern	SFAB-08
Ø 0.129	+0.005 -0.001	Ø 0.129	✓		↓	↓
Ø 0.250	+0.005 -0.001	Ø 0.250	✓		↓	↓
11.66	±0.030	11.66	✓		M-T	SFAB-21
31.41	±0.030	31.41	✓		"	"
Ø 2.030	+0.012 -0.001	Ø 2.030	✓		Vern	SFAB-08
3.80	±0.030	3.80	✓		↓	↓
0.63	±0.030	0.63	✓		↓	↓

Measured by:	Checked By: DAS 16 9-89	QC inspector: DAS 16 9-89	Engineering Approval (*if necessary*):
STD			
Date 14/06/09	Date 14/6/09	Date 14/6/09	Date